January 16, 2002

Mr. Michael Keever
Safety Coordinator
Girtz Industries
5262 N. East Shafer Drive
Monticello, IN 47960

Re: Registered Status,
181-13600-00038

Dear Mr. Keever:

The renewal application from Girtz Industries, received on December 8, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following paint booth and abrasive blasting operation, located at 5262 N. East Shafer Drive, Monticello, Indiana, is classified as registered:

(a) One (1) paint booth with a maximum capacity of 100 metal containers per year and 50 exhaust diverters per year, controlled with a corrugated paper filter which exhausts to stack #1 with a maximum flow rate of 30,000 acfm.

(b) One (1) abrasive blasting operation with a maximum abrasive flow rate of 290 lb/hr and a nozzle pressure of 95 psig.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

   (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

   (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

2. 326 IAC 6-3-2 (Process Operations)
   Pursuant to 181-8591-00038, issued on June 12, 1997, the particulate matter (PM) from the abrasive blasting operation shall be limited to 2.4 pounds per hour.

3. Pursuant to 326 IAC 6-3-2 (Process Operations) the particulate matter (PM) from the spray paint booth shall be limited by the following equation:

   Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

   $E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
   P = process weight rate in tons per hour

   The dry filter shall be in operation at all times the paint booth is in operation, in order to comply with this limit.

4. In order to maintain Registration status, the source must maintain records of the surface coating and solvent used and the VOC and HAP content. The volatile organic

compound emissions from the spray paint booth shall not exceed 25 tons per year and the hazardous air pollutant from the spray paint booth shall not exceed ten (10) tons per year or 25 tpy of any combination of HAPs.

5. Pursuant to 326 IAC 2-5.5-1, the potential to emit of all hazardous air pollutants combined from the spray paint booth shall not exceed twenty-five (25) tons per year.

6. Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the spray booth shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

   Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

This registration is a renewal issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3)). The annual notice shall be submitted to:

Compliance Branch
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/EH

cc: File - White County
White County Health Department
Air Compliance - Eric Courtright
Permit Tracking - Sara Cloe
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	Girtz Industries
Address:	5262 N. East Shafer Drive
City:	Monticello, Indiana 47960
Authorized individual:	Safety Coordinator
Phone #:	(219) 278-7510
Registration #:	181-13600-00038

I hereby certify that Girtz Industries is still in operation and is in compliance with the requirements of Registration 181-13600-00038.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration Renewal

Source Background and Description

Source Name: Girtz Industries
Source Location: 5262 N. East Shafer Drive
County: White
Operation Permit No.: 181-13600-00038
Permit Reviewer: ERG/EH

The Office of Air Quality (OAQ) has reviewed an application from Girtz Industries relating to the operation of an abrasive blasting and painting operation.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) paint booth with a maximum capacity of 100 metal containers per year and 50 exhaust diverters per year, controlled with corrugated paper filter which exhausts to stack #1 with a maximum flow rate of 30,000 acfm.

(b) One (1) abrasive blasting operation with a maximum abrasive flow rate of 290 lb/hr and a nozzle pressure of 95 psig.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

There are no new construction activities included in this permit.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Registration 181-8591-00038, issued on June 12, 1997.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{E}F)
1	Paint booth	40	3.5	30,000	80

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 8, 2000, with additional information received on December 11, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (3 pages.) Note, the calculations are from the TSD for Registration 181-8591-00038. Nothing has changed at this source since this registration was issued in 1997, therefore the same calculations apply.

Potential To Emit of Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	19.48
SO_2	–
VOC	20.26
CO	–
NO_x	–
Single HAPs	<0.6
Total HAPs	1.17

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants are less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants are less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM and VOC is greater than levels listed in 326 IAC 2-1.1-3(d)(1), therefore the source is subject to the provisions of 326 IAC 2-5.5.1.

(d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(e) This type of operation is not one of the twenty eight (28) listed source categories under 326 IAC 2-2.

County Attainment Status

The source is located in White County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. White County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) White County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,

(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in White County and the potential to emit any criteria pollutant is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Emission Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the sandblasting and painting operation will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-3-2 (Process Operations)

Pursuant to 181-8591-00038, issued on June 12, 1997, the particulate matter (PM) from the abrasive blasting operation shall be limited to 2.4 pounds per hour.

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

326 IAC 6-3-2 (Process Operations)

Pursuant to 181-8591-00038, issued on June 12, 1997, the particulate matter (PM) from the spray booth operation shall be limited by the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dry filter shall be in operation at all times the paint booth is in operation in order to comply with this limit.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the spray booth shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the spray booth is in compliance with this requirement.

The paint booth is subject to 326 IAC 8-2-9 because it was constructed after July 1, 1990 and there are actual emissions of fifteen (15) pounds of VOC per day before add-on controls (326 IAC 8-2-1).

Conclusion

The operation of this paint booth and abrasive blasting facility shall be subject to the conditions of the attached Registration 181-13600-00038.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Gritz Industries
Address City IN Zip: Monticello, IN 47960
Plt ID: 181-00038
Reviewer: ERG/ECH
Date: Dec. 11, 2001

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	Transfer Efficiency
ALK-300 Coating	10.0	30.42%	0.0%	30.4%	0.0%	9.28000	0.160	3.04	3.04	4.51	108.29	19.76	6.78	85%
Lacquer Thinner	7.1	100.00%	0.0%	100.0%	0.0%	0.10000	0.160	7.07	7.07	0.11	2.71	0.50	0.00	0%
Potential Emissions			**Add worst case coating to all solvents**							**4.63**	**111.01**	**20.26**	**6.78**	

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Girtz Industries
Address City IN Zip: Monticello, IN 47960
CP: 181-13600
Plt ID: 181-00038
Permit Reviewer: ERG - ECH
Date: Dec. 11, 2001

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Napthalene	Weight % Toluene	Weight % Ethyl Benzene	Weight % Hexane	Weight % Methyl Ethyl Ketone	Weight % Methanol	Xylene Emissions (ton/yr)	Napthalene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Ethyl Benzene Emissions (ton/yr)	Hexane Emissions (ton/yr)	Methyl Ethyl Ketone Emissions (ton/yr)	Methanol Emissions (ton/yr)
ALK-300 Coat.	10	9.280000	0.16	0.20%	0.85%	0.00%	0.05%	0.00%	0.00%	0.00%	0.13	0.55	0.00	0.03	0.00	0.00	0.00
Lacquer Thinner	7.1	0.100000	0.16	5.59%	0.00%	66.28%	0.00%	0.00%	9.49%	9.38%	0.03	0.00	0.33	0.00	0.00	0.05	0.05
Total State Potential Emissions											**0.16**	**0.55**	**0.33**	**0.03**	**0.00**	**0.05**	**0.05**

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emission Calculations - Abrasive Blasting

Company Name: Girtz Industries
Address City IN Zip: Monticello, IN 47960
CP: 181-13600
Plt ID: 181-00038
Reviewer: ERG/EH
Date: 12/11/2001

Table 1 - Emission Factors for Abrasives

	Emission Factor	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Black Beauty	84
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

	Nozzle Pressure (psig)							
Internal diameter, in	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)	290.00000
FR1 = Media flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =	290
D = Density of abrasive (lb/ft3) From Table 2 =	84
D1 = Density of media (lb/ft3) =	84
ID = Actual nozzle internal diameter (in) =	0.25
ID1 = Nozzle internal diameter (in) from Table 3 =	0.25

Flow Rate (FR) (lb/hr) = **290.000** per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =	0.010
FR = Flow Rate (lb/hr) =	290.000
w = fraction of time of wet blasting =	0 %
N = number of nozzles =	1

Uncontrolled Emissions =	**2.90 lb/hr**
	12.70 ton/yr

METHODOLOGY

Emission Factors from Stappa Alapco, Section 3 "Abrasive Blasting"
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs
Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)
E = EF x FR x (1-w/200) x N
w should be entered in as a whole number (if w is 50%, enter 50)